Elementary Keyboarding Workshop
Is your school district looking for guidance in the area of elementary keyboarding? Are you seeking the right combination of hours of instruction combined with the appropriate grade level? Then, now is the time to register for an elementary keyboarding workshop presented by Bonnie Sibert and Beverly Newton at the Nebraska Department of Education computer lab.

Invite a team of teachers to learn keyboarding teaching strategies, preview elementary keyboarding software and review keyboarding scope and sequence plans from Nebraska school districts. In addition, the following information may guide you in your keyboarding scope and sequence plans. Register online for the workshop at www.nde.state.ne.us/TECHCEN by selecting Training Workshops.

Model Scope and Sequence for Keyboarding
The keyboarding scope and sequence should begin with the following:

Exposure to Foundation Technology Skills, Grades K – 6
Keyboarding Awareness, Grades K – 3

Introduction to Keyboarding (20 days each year—20-30 minutes each day)

Grade 4 – touch typing (don't teach numbers)
Grade 5 – review keyboarding and integrate into language arts
Grade 6 – build skill and writing process

Elementary students will master touch operation of the keyboard and demonstrate correct technique, keystroking and care of equipment.

Keyboarding Applications *(9 weeks),* Grades 6 – 8
A course designed for students to learn touch techniques and proper keystroking while continuing to develop composition and proofreading skills as well as speed and accuracy. Students will demonstrate keyboarding proficiency in document formatting (personal letters, reports, tables). Other forms of input technology (speech recognition, wireless devices, voice-activated, and handwriting recognition applications) may be introduced.

Computer Applications *(9 weeks),* Grades 7 – 8
A course designed for students to improve touch method keyboarding skills and to develop handwriting recognition and speech recognition skills. Instruction emphasizes improved techniques for increased speed and accuracy and composition at the keyboard. Students will be introduced to word processing, electronic presentation, and spreadsheet applications.

Information Technology Career Cluster
The Information Technology Career Cluster offers four pathways for students to consider as a career option: Network Systems, Information Support and Services, Programming and Software Development and Web and Digital Communication. In addition, information technology is identified as a foundation knowledge and skill area for all students regardless of their career interest. The following course (previously called Computer Applications I) has been identified as a foundation course:

Information Technology Applications I *(18 weeks),* Grades 9 – 10
Students will demonstrate basic skills in the areas of word processing, spreadsheet applications, database applications, electronic presentation, Internet use, security issues and electronic communication. Students manage computer operations and file storage, identify ethical issues pertaining to information systems and learn about information technology careers.

Other Information Technology Career Cluster courses include:

Information Technology Applications II *(18 weeks),* Grades 9 – 10
Students will develop skills in advanced word processing and spreadsheet applications as well as integrating applications using word processing, spreadsheet, database and electronic presentation software. Students will develop skills in desktop publishing, including page layout and formatting and web page development by creating and editing web pages. Students will demonstrate knowledge of advanced operating systems principles, basic computer troubleshooting, Internet security issues, ethical issues pertaining to information systems and virus protection.

Information Technology Applications III (18 weeks), Grades 10 – 12
Students will work with a variety of software to develop items, such as desktop-published documents, digital media, podcasts, and E-portfolios. Students will develop skills in storyboarding, digital video capturing and editing, beginning animation, photo editing and web design. A project-based approach is used through the integration of a variety of digital media.

Database Design and Development (18 weeks), Grades 10 – 12
A course designed to provide an introduction to the concepts of relational databases, the application of databases to business situations and the management of relational databases and the tools associated with them. Students will utilize basic SQL syntax.

Desktop Publishing (18 weeks), Grades 10 – 12
Students will develop skill in the electronic procedures of producing and editing publications. Students will create, format, illustrate, design, edit/revise and print publications including electronically produced newsletters, flyers, brochures, reports, advertising materials and other publications. Students will demonstrate document composition and communication competencies.

Digital Media (18 weeks), Grades 10 – 12
Students will create, design and produce digital media programs including sound, video, graphics, text, animation and motion graphics. Emphasis will be placed on effective use of tools for interactive multimedia production including storyboarding, visual development, project management and web processes.

Information Technology Fundamentals (18 weeks), Grades 10 – 12
Students are introduced to information technology and voice, video and data communications and will demonstrate knowledge and problem-solving skills in the area of operating systems and computer hardware and understand information technology's ethical issues. Units would include, but not be limited to storage and drives, system boards, processors, memory and peripherals. Students may have the opportunity to build a computer, install the operating systems and add peripherals. Help-desk skills may be included in the course.

Network Systems (18 weeks), Grades 10 – 12
Students will demonstrate knowledge of working with voice, video, and data networks, including hubs, switches and routers. Students will develop an understanding of LAN (local area network), WAN (wide

area network), wireless connectivity and Internet-based communication with strong emphasis on LAN function, design, and installation practices.

Programming I (18 weeks), Grades 10 – 12
A course designed to teach problem-solving skills through the use of languages such as Visual Basic, C++ and HTML. The following structured programming concepts might be included: top-down design, output design, hierarchy chart, program design, coding and testing, flow charting, editing and debugging.

Programming II (18 weeks), Grades 10 – 12
Students will demonstrate the program development process through the introduction and use of languages such as C++, Visual Basic, Java, HTML, SQL, RPG, COBOL and Assembler.

Programming III (18 weeks), Grades 11 – 12
Students will demonstrate advanced skills in the program development process through expanded use of programming language. Languages may include, but are not limited to C++, Visual Basic, Java, HTML, SQL, RPG, COBOL and Assembler. Students demonstrating advanced level programming knowledge and skills may be exposed to collaborative environments that simulate project environments.

Web Design and Development (18 weeks), Grades 10 – 12
Students will demonstrate knowledge of web design and languages, including HTML, and utilize web design software to develop web pages. Students will apply principles and elements of design using images, hyperlinks, tables, forms, and cascading style sheets. Students may also maintain a school web site.

For additional information about the Information Technology Career Cluster, visit http://www.nde.ne.state/BMIT/.